



PRELIMINARY DETERMINATION
ON PERMIT APPLICATION

Date of Mailing: April 12, 2011

Name of Applicant: Exxon Mobil Corporation, c/o Exxon Mobil Bozeman Terminal

Source: Bulk distribution terminal for petroleum products

Proposed Action: The Department of Environmental Quality (Department) proposes to issue a permit, with conditions, to the above-named applicant. The application was assigned Permit Application Number 2830-03.

Proposed Conditions: See attached.

Public Comment: Any member of the public desiring to comment must submit such comments in writing to the Air Resources Management Bureau (Bureau) of the Department at the above address. Comments may address the Department's analysis and determination, or the information submitted in the application. In order to be considered, comments on this Preliminary Determination are due by April 27, 2011. Copies of the application and the Department's analysis may be inspected at the Bureau's office in Helena. For more information, you may contact the Department.

Departmental Action: The Department intends to make a decision on the application after expiration of the Public Comment period described above. A copy of the decision may be obtained at the above address. The permit shall become final on the date stated in the Department's Decision on this permit, unless an appeal is filed with the Board of Environmental Review (Board).

Procedures for Appeal: Any person jointly or severally adversely affected by the final action may request a hearing before the Board. Any appeal must be filed by the date stated in the Department's Decision on this permit. The request for a hearing shall contain an affidavit setting forth the grounds for the request. Any hearing will be held under the provisions of the Montana Administrative Procedures Act. Submit requests for a hearing in triplicate to: Chairman, Board of Environmental Review, P.O. Box 200901, Helena, MT 59620.

For the Department,

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VW:DF
Enclosures

MONTANA AIR QUALITY PERMIT

Issued To:	Exxon Mobil Corporation c/o Exxon Mobil Bozeman Terminal 220 W. Griffin Road Bozeman, Montana 59715	MAQP: #2830-03 Application Complete: 03/09/2011 Preliminary Determination Issued: 04/12/2011 Department's Decision issued: Permit Final: AFS #: 031-0009
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A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Exxon Mobil Corporation (Exxon Mobil), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

SECTION I: Permitted Facilities

A. Plant Location

The facility is located north of Interstate 90, approximately one-half mile north of Bozeman. The legal description of the facility property is Section 6, Township 2 South, Range 6 East, in Gallatin County, Montana.

B. Current Permit Action

On March 3, 2011, the Department of Environmental Quality (Department) received an application from Exxon Mobil for modifications to enable distribution of ethanol additized fuels from the Bozeman Bulk Terminal. The project changes the designated use of one existing tank (Tank 206), adds a new offloading rack dedicated to unloading denatured ethanol, and adds fugitive VOC emission sources such as pipe fittings and pumps. The application also identified applicability of 40 Code of Federal Regulations (CFR) 60, Subpart Kb and 40 CFR 63, Subpart BBBB to this facility. In addition, the permit was updated to reflect current Department permit format, language and rule references.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. Exxon Mobil's loading rack shall be equipped with a vapor recovery system (VRU) designed to collect the organic compound liquids or vapors displaced from gasoline and distillate tank trucks during product loading (ARM 17.8.749).
2. The vapor recovery system shall be designed to prevent any Volatile Organic Compound (VOC) vapors collected at one loading rack from passing to another loading rack (ARM 17.8.749).
3. The loading of liquid product into tank trucks shall be limited to vapor-tight gasoline and distillate tank trucks using the following procedures (ARM 17.8.749):
 - a. Exxon Mobil shall obtain the vapor tightness documentation described in the test methods and procedures contained in Attachment 1 to this permit or Department of Transportation (DOT) certification methods for each gasoline and distillate tank truck that is to be loaded at the permitted loading rack;
 - b. Exxon Mobil shall require the tank identification number to be recorded as each gasoline and distillate tank truck is loaded at the terminal; and

- c. Exxon Mobil shall take the necessary steps to ensure that the non-vapor-tight gasoline and distillate tank truck will not be reloaded at the permitted loading rack until vapor tightness documentation for that tank truck is obtained.
4. Exxon Mobil shall act to ensure that loading of gasoline and distillate tank trucks at the permitted loading rack are made only into tank trucks equipped with vapor recovery equipment that is compatible with the terminal's vapor recovery system (ARM 17.8.749).
5. Exxon Mobil shall act to ensure that the terminal's and the tank truck's vapor recovery systems are connected during each loading of a gasoline and distillate tank truck at the permitted loading rack (ARM 17.8.749).
6. The vapor recovery and liquid loading equipment shall be designed and operated to prevent gauge pressure in the gasoline and distillate tank truck from exceeding 4,500 Pascals (Pa) (450 millimeters (mm) of water) during product loading. This level shall not be exceeded when measured by the procedures specified in the test methods and procedures contained in Attachment 1 to this permit (ARM 17.8.749).
7. No pressure-vacuum vent in the permitted terminal's vapor recovery system shall begin to open at a system pressure less than 4,500 Pa (450 mm of water) (ARM 17.8.749).
8. The total organic compound emissions to the atmosphere from the vapor recovery system due to loading liquid product into gasoline tank trucks shall not exceed 35 milligrams per liter (mg/L) of gasoline loaded (ARM 17.8.749).
9. Loading of gasoline and distillate tank trucks shall be restricted to the use of submerged fill (ARM 17.8.749).
10. Hydrocarbons adsorbed in the activated carbon shall be recovered and returned to the appropriate product storage tank (ARM 17.8.749).
11. Facility product loading shall be limited to the amounts listed in the following table (ARM 17.8.749).

Product Loaded	Permitted Annual Throughput (Mgal/yr)
Mogas	170
Diesel	100

12. Exxon Mobil shall not store petroleum liquid with a maximum true vapor pressure greater than 10.5 kiloPascals (kPa) (1.5 pounds per square inch atmospheric (psia)) in the permitted petroleum liquid storage tank unless (ARM 17.8.749):
 - a. The tank is equipped with an internal floating roof equipped with a closure seal or seals to close the space between the roof edge and tank wall (ARM 17.8.752);
 - b. The tank is maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials; and
 - c. All openings, except stub drains, are equipped with covers, lids, or seals such that:

- i. The cover, lid, or seal is in the closed position at all times, except when in actual use;
 - ii. The automatic bleeder vents are closed at all times except when the roof is being floated off or being landed on the roof leg supports; and
 - iii. The rim vents are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.
- 13. Exxon Mobil shall install secondary, vapor mounted seals on Mogas storage tanks #201, #202 and #203 by December 31, 1997 (ARM 17.8.749).
- 14. Exxon Mobil shall ensure that (ARM 17.8.749):
 - a. All valves used shall be high quality valves containing high quality packing;
 - b. All open-ended valves shall be of the same quality as the valves described above. Any open-ended line or valve shall be sealed with a second valve, blind flange, cap, or plug; and
 - c. All pumps used in gasoline service shall be equipped with a single mechanical seal system.
- 15. Exxon Mobil shall comply with standards, limitations and the reporting, recordkeeping, testing and notification requirements contained in 40 CFR 60, Subpart Kb, as applicable (ARM 17.8.340 and 40 CFR 60, Subpart Kb).
- 16. Exxon Mobil shall comply with standards, limitations and the reporting, recordkeeping, testing and notification requirements contained in 40 CFR 63, Subpart BBBBBB, as applicable (ARM 17.8.342 and 40 CFR 63, Subpart BBBBBB).

B. Testing Requirements

- 1. The VRU shall be tested for total organic compounds on an every 4-years basis to demonstrate compliance with the emission limitations contained in Section II.A.8, or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105).
- 2. Process rates during testing must be at specific conditions that are representative of maximum operating capacity or maximum permitted operating capacity, unless otherwise agreed upon by the Department and Exxon Mobil (ARM 17.8.106).
- 3. Exxon Mobil shall use the test methods and procedures contained in Attachments 1 and 2 to this permit to determine compliance with Sections II.A.6 and II.A.8 of this permit (ARM 17.8.105)
- 4. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
- 5. The Department may require further testing (ARM 17.8.105).

C. Inspection Requirements

1. For each calendar month, the vapor recovery system, the vapor control system, and each loading rack that loads gasoline and distillate tank trucks shall be inspected for total organic compounds liquid or vapor leaks during product transfer operations. For purposes of this requirement, detection methods incorporating sight, sound, or smell are acceptable. Each detection of a leak shall be recorded and the source of the leak repaired within 15 calendar days after it is detected (ARM 17.8.105 and ARM 17.8.749).
2. For tanks equipped with a single and/or a double seal system, Exxon Mobil shall (ARM 17.8.105 and ARM 17.8.749):
 - a. Visually inspect the internal floating roof and its closure seal or seals, through roof hatches at least once every 12 months; and
 - b. Perform a complete inspection of any cover and single seal whenever the tank is emptied for non-operational reasons or at least every 10 years, whichever is more frequent.
3. Each calendar month, all valves, flanges, pump seals, and open-ended lines shall be inspected for total organic compounds, liquid or vapor leaks. For purposes of this paragraph, detection methods incorporating sight, sound, or smell are acceptable (ARM 17.8.105 and ARM 17.8.749).
4. Each calendar quarter, all pump seals shall be instrument tested for total organic compounds, liquid or vapor leaks. When an instrument reading of 10,000 parts per million (ppm) or greater is measured, or if there are indications of liquid dripping from the equipment, it shall be determined that a leak has been detected (ARM 17.8.749).
5. Exxon Mobil shall (ARM 17.8.749):
 - a. Make a first attempt at repair for any leak not later than 5 calendar days after the leak is detected; and
 - b. Repair any leak as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section II.C.6 below.
6. Delay of repair of equipment for which a leak has been detected will be allowed if repair is technically infeasible without a process unit shutdown. Such equipment shall be repaired before the end of the first process unit shutdown after detection of the leak.

D. Recordkeeping Requirements

1. The tank truck vapor tightness documentation required in Section II.A.3 of this permit shall be kept on file at the terminal, in a permanent form, and be made available for inspection and shall be updated at least once per year to reflect current test results as determined by Environmental Protection Agency (EPA) Method 27 (ARM 17.8.749).

2. A record of each monthly leak inspection, required under Section II.C of this permit, shall be kept on file at the terminal. Inspection records shall include, at a minimum, the following information (ARM 17.8.749):
 - a. Date of inspection;
 - b. Findings (may indicate no leaks discovered or the location, nature, and severity of each leak);
 - c. Leak determination method;
 - d. Corrective action (date each leak repaired and reasons for any repair interval in excess of 15 calendar days); and
 - e. Inspector name and signature.
3. Exxon Mobil shall maintain daily records of gasoline and distillate throughput. This shall include all products shipped and received at the loading racks (ARM 17.8.749).
4. All records compiled in accordance with this permit must be maintained by Exxon Mobil as a permanent business record for at least 5 years following the date of the measurement, must be available for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).
5. Each calendar month, all valves, flanges, pump seals, and open-ended lines shall be inspected for total organic compounds, liquid or vapor leaks. For purposes of this paragraph, detection methods incorporating sight, sound, or smell are acceptable (ARM 17.8.105 and ARM 17.8.749).
6. Each calendar quarter, all pump seals shall be instrument tested for total organic compounds, liquid or vapor leaks. When an instrument reading of 10,000 parts per million (ppm) or greater is measured, or if there are indications of liquid dripping from the equipment, it shall be determined that a leak has been detected (ARM 17.8.749).
7. Exxon Mobil shall (ARM 17.8.749):
 - a. Make a first attempt at repair for any leak not later than 5 calendar days after the leak is detected; and
 - b. Repair any leak as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section II.D.8 below.
8. Delay of repair of equipment for which a leak has been detected will be allowed if repair is technically infeasible without a process unit shutdown. Such equipment shall be repaired before the end of the first process unit shutdown after detection of the leak.
9. Exxon Mobil shall record any change in products stored in the permitted storage tanks that are allowed within the restrictions of this permit (ARM 17.8.749).
10. The following records shall be maintained by Exxon Mobil, on site, for a minimum of 5 years and shall be made available to the Department upon request (ARM 17.8.749):

- a. The types of volatile petroleum liquids stored in the permitted tanks;
 - b. The maximum true vapor pressure of the liquid as stored; and
 - c. The results of the inspections required in Section II.C of this permit.
11. For exempted sources containing a petroleum liquid with a true vapor pressure greater than 10.5 kPa (1.5 psia), the following records shall be maintained by Exxon Mobil, on site, for a minimum of 5 years and shall be made available to the Department upon request (ARM 17.8.749):
- a. The average monthly storage temperature;
 - b. The type of liquid stored; and
 - c. The maximum true vapor pressure for any petroleum liquid with a true vapor pressure greater than 10.5 kPa (1.5 psia).
12. All records compiled in accordance with this permit must be maintained by Exxon Mobil as a permanent business record for at least 5 years following the date of the measurement, must be available for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).
13. A record of each monthly leak inspection required under Section II.C.1 and II.C.3 of this permit shall be kept on file at the terminal. Inspection records shall include, at a minimum, the following information (ARM 17.8.749):
- a. Date of inspection;
 - b. Findings (may indicate no leaks discovered or location, nature, and severity of each leak);
 - c. Leak determination method;
 - d. Corrective action (date each leak repaired and reasons for any repair interval in excess of 15 calendar days); and
 - e. Inspector name and signature.

E. Operational Requirements

- 1. Exxon Mobil shall submit records of inspections required in Section II.D.2. of this permit to the Department within 60 days of the date of the inspection (ARM 17.8.749).
- 2. Exxon Mobil shall notify the Department of the date of inspection at least 30 days prior to the refilling of each storage vessel for which an inspection is required by Section II.C.2 of this permit (ARM 17.8.749).
- 3. Exxon Mobil shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis and sources identified in Section I.A of the permit analysis.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505). Exxon Mobil shall submit the following information annually to the Department by March 1 of each year; the information may be submitted along with the annual emission inventory (ARM 17.8.505).

- a. The type of petroleum liquid stored in each tank;
- b. The true vapor pressure of the petroleum liquid stored in each tank;
- c. The annual throughput of petroleum liquids for each tank in gallons; and
- d. The annual throughput of petroleum liquids for each loading rack in gallons.

For reporting purposes, the equipment shall be identified using the tank numbers contained in Section I.A of the Permit Analysis.

4. Exxon Mobil shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745, that would include ***the addition of a new emission unit***, change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location or fuel specifications, or would result in an increase in source capacity above its permitted operation.. The notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).
5. All records compiled in accordance with this permit must be maintained by Exxon Mobil as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

SECTION III: General Conditions

- A. Inspection – Exxon Mobil shall allow the Department’s representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if Exxon Mobil fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Exxon Mobil of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).

- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties, or other enforcement action as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.
- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by the Department at the location of the source.
- G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by Exxon Mobil may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).

ATTACHMENT 1
Exxon Mobil - Bozeman Marketing Terminal
Test Methods and Compliance Procedures

1. In determining compliance with Section II.A.6 of this permit, the following procedures shall be used:
 - a. Calibrate and install a pressure measurement device (liquid manometer or equivalent instrument) capable of measuring up to 500 millimeters (mm) (20 inches (in.)) of water gauge pressure with ± 2.5 mm (0.10 in.) of water precision;
 - b. Connect the pressure measurement device to a pressure tap in the terminal's vapor recovery system, located as close as possible to the connection with the gasoline tank truck; and
 - c. During the performance test, record the pressure every 5 minutes while a gasoline or distillate tank truck is being loaded, and record the highest instantaneous pressure that occurs during each loading. Every loading position shall be tested at least once during the performance test.
2. In determining compliance with the mass emission limitations in Section II.A.8 of this permit, the following reference methods shall be used:
 - a. In determining volume at the exhaust vent, EPA Method 2A for all other vapor control systems; and
 - b. In determining total organic compounds concentration at the exhaust vent, EPA Method 25A or 25B. The calibration gas shall be either propane or butane.
3. Immediately prior to a performance test required to determine compliance with Sections II.A.6 and II.A.8 of this permit, all potential sources of vapor and liquid leakage from the terminal's vapor recovery system equipment shall be monitored for leaks according to the procedures in Attachment 2 to this permit. The monitoring shall be conducted only while a gasoline or distillate tank truck is being loaded. A reading of 10,000 parts per million by volume (ppmv), or greater, as methane, shall be considered a leak. All leaks shall be repaired prior to conducting the performance test.
4. The test procedure for determining compliance with Sections II.A.6 and II.A.8 of this permit is as follows:
 - a. All testing equipment shall be prepared and installed as specified in the appropriate test methods;
 - b. The time period for a performance test shall be not less than 6 hours; during which, at least 300,000 L (80,000 gal) of gasoline are loaded. If the throughput criterion is not met during the initial 6 hours, the test may be either continued until the throughput criterion is met, or resumed the next day with another complete 6 hours of testing. As much as possible, testing should be conducted during the 6-hour period in which the highest throughput normally occurs; and
 - c. For intermittent vapor control systems:
 - i. The vapor holder level shall be recorded at the start of the performance test. The end of the performance test shall coincide with a time when the vapor holder is at its original level; and
 - ii. At least two startups and shutdowns of the vapor processor shall occur during the performance test. If this does not occur under automatically controlled operation, the system shall be manually controlled.

- d. The volume of gasoline and distillate dispensed, during the performance test period at all loading racks whose vapor emissions are controlled by the vapor processing system being tested, shall be determined. This volume may be determined from terminal records or from gasoline and distillate dispensing meters at each loading rack;
- e. An emission testing interval shall consist of each 5-minute period during the performance test. For each interval:
 - i. The reading from each measurement instrument shall be recorded; and
 - ii. The volume exhausted and the average total organic compounds concentration in the exhaust vent shall be determined as specified in the appropriate test method. The average total organic compounds concentration shall correspond to the volume measurement by taking into account the sampling system response time.
- f. The mass emitted during each testing interval shall be calculated as follows:

$$M_{ei} = 10^{-6} K V_{es} C_e$$

where:

M_{ei} = Mass of total organic compounds (milligrams (mg)) emitted during testing interval i.

V_{es} = Volume of air-vapor mixture exhausted (cubic meters (m^3)), at standard conditions.

C_e = Total organic compounds concentration (measured as carbon) at the exhaust vent (ppmv).

K = Density of calibration gas (milligrams/cubic meter (mg/m^3)) at standard conditions (1.83x10⁶ for propane; 2.41x10⁶ for butane).

s = Standard conditions, 20° C and 760 millimeters of mercury (mm Hg).

- g. The total organic compounds mass emissions shall be calibrated as follows:

$$E = \frac{\sum_{i=1}^n M_{ei}}{L}$$

Where:

E = Mass of total organic compounds emitted per volume of gasoline loaded, mg/L.

L = Total volume of gasoline loaded, L.

n = Number of testing intervals.

5. Alternate test methods may be used for determining compliance only after approval from the Department.

ATTACHMENT 2
Leak Detection Methods for Volatile Organic Compounds (VOCs)
Test Methods and Compliance Procedures

1. Permittees required to carry out a leak detection monitoring program shall comply with the following requirements:
 - a. Monitoring shall be performed in accordance with Method 21 of 40 Code of Federal Regulations (CFR) Part 60, Appendix A;
 - b. The detection instrument shall meet the performance criteria of EPA Method 21;
 - c. The detection instrument shall be calibrated before and after use on each day of its use by the methods specified in EPA Method 21. Failure to achieve a post-use calibration precision of less than 10 percent shall constitute grounds for rejecting all tests performed since the last pre-use calibration. In such cases, required leak tests must be redone;
 - d. Calibration gases shall be:
 - i. Zero air (less than 10 ppm of hydrocarbon in air); and
 - ii. A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.
 - e. The detection instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in EPA Method 21.
2. When equipment is tested for compliance with the requirement that there be no detectable emissions, the test shall comply with the following:
 - a. The requirements of (1)(a) through (1)(e) of this attachment shall apply and shall be met; and
 - b. The background level shall be determined as set forth in EPA Method 21.
3. Alternate test methods may be used for determining compliance only after approval from the Department.

Montana Air Quality Permit (MAQP) Analysis
Exxon Mobil Corporation
Bozeman Marketing Terminal
MAQP #2830-03

I. Introduction/Process Description

Exxon Mobil Corporation (Exxon Mobil) owns and operates a bulk distribution terminal for petroleum products located north of Interstate 90, approximately one-half mile north of Bozeman. The property's legal description is Section 6, Township 2 South, Range 6 East, in Gallatin County, Montana. The facility is known as the Bozeman Marketing Terminal.

A. Permitted Equipment

The facility consists of the following equipment:

Product	Serial #	Tank Type	Seal Type	Capacity (bbls)	Diameter (ft)	Year Manufactured	Tank Color
Mogas	201	IFR	Primary	15,000	49	1954	white
Mogas	202	IFR	Primary	30,000	73.3	1954	white
Mogas	203	IFR	Primary	10,000	45	1954	white
Diesel	204	Fixed	Vented	15,000	49	1954	lt gray
Diesel	205	Fixed	Vented	10,000	45	1954	lt gray
Denatured Ethanol	206	IFR	Vented	10,000	45	1954	lt gray
Additive	208	Fixed	Vented	240	10.5	1987	white
Additive	209	Horizontal	Vented	70	5.3	1987	white
Interface	210	UST	Vented	120	6	1981	-
Interface	211	UST	Vented	48	5	1987	-
Interface	212	UST	Vented	286	9.25		
Dyed Diesel	213	Horizontal	Vented	24	45.5 in	1994	
Additive	214	Horizontal	Vented	245	8		white
Product loading rack with three gasoline loading arms and one distillate loading arm. Gasoline and distillate loading activities are to be submerged fill with dedicated normal service. Tank truck loading and unloading of gasoline and distillate is accomplished at the product loading rack. Interface and additive unloading and interface loading is accomplished at a separate loading location away from the main loading rack.							
A John Zink Carbon Adsorption/Absorption Gasoline Vapor Recovery System (VRU) will remove the gasoline and additive vapors from the incoming air/hydrocarbon vapor mixture. Interface and distillate are loaded without the use of the VRU.							
Fugitive Emissions from total facility valves, flanges, pump seals, open-ended lines, and oil/water separators.							

B. Source Description

Products manufactured in refineries are pumped to the terminal via the Yellowstone Pipeline for storage, and are then loaded directly into tractor trailers for delivery to a retail point. Due to pipeline limitations, product is also brought in via tractor trailer. Products loaded at the facility include mogas (premium and regular unleaded and leaded regular), jet fuel, several different grades of diesel, heating oil, and interface. Interface consists of the mixture of water and hydrocarbons that results from draining any off-specification product from the bottom of storage tanks; any product drained from tractor trailers prior to being loaded at the loading rack; and the product made by mixture of two adjacent products within the pipeline during transport. Additives are added at the point of loading to enhance certain desirable product characteristics. Additive arrives at the terminal via truck from a sister terminal in Billings or from the manufacturer.

The facility operates four internal floating roof tanks (#201, #202, #203, and #206) and three cone roof tanks (#204, #205, and #208). Three of the floating roof tanks store motor gasoline and tank #206 stores denatured ethanol additive. Two of the cone roof tanks (#204 and #205) store diesel and tank #208 stores additive. Tanks #209 and #214 are horizontal tanks that store additive and tank #213 is a horizontal tank storing dyed diesel. Total shell capacity of storage in the terminal is about 3.8 million gallons. There are also three underground tanks used for storing interface (#210, #211, and #212).

Loading is conducted at the loading rack for all products except interface. Products are pumped from storage on the terminal's property. Interface is loaded near the interface tanks away from the loading rack.

Each truck must have a "permissive", based on information from the tightness certification contained in an on-board microchip. Without the permissive, the truck cannot be loaded without intervention by an Exxon Mobil employee. This system was installed throughout the Exxon Mobil terminal circuit to facilitate Clean Air Act, Standards of Performance for New Stationary Sources (NSPS), Department of Transportation (DOT) and state tightness certification requirements. Once a permissive has been received (the process requiring only seconds) the vapor recovery system (VRU) will then automatically activate. Although the VRU was designed to remove gasoline vapors, as standard operating practice the VRU is also used whenever distillate is being loaded.

C. Permit History

On July 22, 1994, Exxon Company, USA (Exxon), submitted a complete MAQP Application to construct and operate a gasoline vapor recovery system at the Bozeman Marketing Terminal. In addition, Exxon requested that the permit include the entire bulk marketing terminal to establish mutually agreeable and enforceable permit limitations and conditions. Since the Bozeman Marketing Terminal was an existing source (operating at the same location prior to March 16, 1979), a Best Available Control Technology (BACT) determination was not required. However, a BACT analysis was submitted in the permit application and the Department of Environmental Quality (Department) used the analysis to review the existing control equipment. On September 24, 1994, **MAQP #2830-00** was issued to Exxon.

On October 25, 2004, the Department received a letter from Exxon Mobil. Exxon Mobil notified the Department of a physical change to the existing distillate fuels loading rack. The change consisted of the addition of a diesel fuel lubricity additive injection system. At the Department's request, Exxon Mobil provided the Potential to Emit (PTE) calculation for the proposed change on November 1, 2004. The permit action added the diesel fuel lubricity additive injection system to the permit according to the provisions of ARM 17.8.745. In

addition, the permit was updated to reflect current permit language and rule references used by the Department. Furthermore, the name on the permit was updated from Exxon Company, USA, to Exxon Mobil. **MAQP #2830-01** replaced MAQP #2830-00.

On September 29, 2005, the Department received a notification from Exxon Mobil that the above ground storage tank #207 had been dismantled. Exxon Mobil requested the amendment of MAQP #2830-01 to reflect the removal of the storage tank. The permit action removed storage tank #207 from the permit. In addition, the permit format, language, and rule references were updated to reflect current Department permit format, language and rule references. **MAQP #2830-02** replaced MAQP #2830-01.

D. Current Permit Action

On March 3, 2011, the Department received an application from Exxon Mobil requesting that MAQP #2830-02 be modified to include changes to the Bozeman Bulk Terminal to enable distribution of ethanol additized fuels. The application also identified the applicability of 40 Code of Federal Regulations (CFR) 60, Subpart Kb and 40 CFR 63, Subpart BBBB to this facility. The current permit action modifies the permit to change the designated use of existing Tank 206 to store denatured ethanol, adds a new offloading rack dedicated to unloading denatured ethanol, adds associated fugitive VOC emission sources such as pipe fittings and pumps, and adds 40 CFR 60, Subpart Kb and 40 CFR 63, Subpart BBBB to the Permit Analysis. The modification also updates the permit to reflect current rule references, permit language, permit format, and emission factors. **MAQP #2830-03** replaces MAQP #2830-02.

E. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department. Upon request, the Department will provide references for location of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 – General Provisions, including but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

Exxon Mobil shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to the following:

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀

Exxon Mobil must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter (PM). (2) Under this rule, Exxon Mobil shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne PM.
3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere PM caused by the combustion of fuel in excess of the amount determined by this rule.
4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere PM in excess of the amount set forth in this rule.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this rule.

6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device as described in (1) of this rule.
7. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 (Code of Federal Regulations (CFR) Part 60, Standards of Performance for New Stationary Sources (NSPS). Exxon Mobil is considered an NSPS-affected facility under 40 CFR Part 60 and is subject to the requirements of the following subparts.
 - a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below.
 - b. 40 CFR 60, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 applies to each storage vessel with a capacity greater than or equal to 75 cubic meters (m³) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984. Subpart Kb applies to Exxon Mobil's Bozeman Bulk Terminal, because modifying the denatured ethanol additive tank (#206) to include an internal floating roof, triggers Subpart Kb.
 - c. 40 CFR 60, Subpart XX – Standards of Performance for Bulk Gasoline Terminals applies to loading racks at bulk gasoline terminals that load product into gasoline tank trucks which commenced construction or modification after December 17, 1980. Subpart XX applies to truck loading rack located at Exxon Mobil because adding the diesel lubricity container to the loading rack triggers Subpart XX.
8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR Part 63 as listed below.
 - a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to a National Emission Standard for Hazardous Air Pollutants (NESHAP) Subpart as listed below:
 - b. 40 CFR 63 Subpart R - National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations) applies to each bulk gasoline terminal except those bulk gasoline terminals for which the owner or operator has documented and recorded to the Administrator's satisfaction that the facility is not a major source. Since the emission of Hazardous Air Pollutants (HAPs) from the Exxon Mobil facility is less than 10 tons per year for any individual HAP and less than 25 tons per year for all HAPs combined, the facility is not a major source of HAPs and is not subject to the provisions of 40 CFR 63, Subpart R.
 - c. 40 CFR 63, Subpart BBBBBB—National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities establishes national emission limitations and management practices for hazardous air pollutants (HAP) emitted from area source gasoline distribution bulk terminals, bulk plants, and pipeline facilities. This subpart also establishes

requirements to demonstrate compliance with the emission limitations and management practices. Subpart BBBB applies to each area source bulk gasoline terminal that is not subject to the control requirements of 40 CFR 63, Subpart R. The Exxon Mobil Bozeman bulk gasoline terminal is not subject to the provisions of 40 CFR 63, Subpart R therefore, it is subject to the provisions of 40 CFR 63, Subpart BBBB. The compliance dates and the required recordkeeping, reporting, best management practices, and emissions limitations vary depending on the compliance methods chosen.

D. ARM 17.8, Subchapter 4 – Stack Height and Dispersion Techniques, including, but not limited to:

1. ARM 17.8.401 Definitions. This rule includes a list of definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.402 Requirements. Exxon Mobil must demonstrate compliance with the ambient air quality standards with a stack height that does not exceed Good Engineering Practices (GEP).

E. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. Exxon Mobil submitted the appropriate permit application fee for the current permit action.
2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

F. ARM 17.8, Subchapter 7 – Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, modify, or use any air contaminant sources that have the potential to emit (PTE) greater than 25 tons per year of any pollutant. Exxon Mobil has a PTE greater than 25 tons per year of volatile organic compound (VOC); therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.

4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. Exxon Mobil submitted the required permit application for the current permit action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Exxon Mobil submitted an affidavit of publication of public notice for the March 6, 2011, issue of the *Bozeman Daily Chronicle*, a newspaper of general circulation in the town of Bozeman in Gallatin County, as proof of compliance with the public notice requirements.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The BACT analysis is discussed in Section III of this permit analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Exxon Mobil of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.
12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).

13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
 14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of intent to transfer, including the names of the transferor and the transferee, is sent to the Department.
- G. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:
1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
 2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source because this facility is not a listed source and the facility's PTE is below 250 tons per year of any pollutant (excluding fugitive emissions).

- H. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:
1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:
 - a. PTE > 100 tons/year of any pollutant;
 - b. PTE > 10 tons/year of any one HAP, PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or
 - c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) in a serious PM₁₀ nonattainment area.
 2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #2830-03 for Exxon Mobil, the following conclusions were made:
 - a. The facility's PTE is less than 100 tons/year for any pollutant.
 - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs.

- c. This source is not located in a serious PM₁₀ nonattainment area.
- d. This facility is subject to current NSPS (40 CFR 60, Subpart XX and Subpart Kb).
- e. This facility is subject to area source provisions of a current NESHAP standard (40 CFR 63, Subpart BBBBBB)
- f. This source is not a Title IV affected source, nor a solid waste combustion unit.
- g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that Exxon Mobil will be a minor source of emissions as defined under Title V. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, Exxon Mobil will be required to obtain a Title V Operating Permit.

III. BACT Determination

A BACT determination is required for each new or modified source. Exxon Mobil shall install on the new or modified source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized. A BACT analysis was submitted by Exxon Mobil in the MAQP #2830-03 application, addressing some available methods of controlling fugitive VOC emissions from new piping components and Tank 206. The Department reviewed these methods, as well as previous BACT determinations. The following control options have been reviewed by the Department in order to make the following BACT determination. The control options selected have controls and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

New Fugitive VOC Piping Components

VOC emissions resulting from the addition of piping components is expected to be no more than 0.22 tons per year (TPY). This low emission rate and the technical challenge of capturing emissions from a large number of minute sources dispersed over a large area make add-on controls technically and economically infeasible. Emissions from these sources are currently minimized by following a prescribed program of leak inspection, recording, and repair. This program constitutes BACT for these fugitive sources.

Fugitive Tank Emissions

Tank 206 will be modified by adding an internal floating roof including a mechanical shoe primary seal and a rim-mounted wiper secondary seal. With the internal floating roof, potential fugitive emissions will be 0.29 tpy. The proposed internal floating roof provides an emissions control efficiency of 98%. This type of control is typically considered BACT for similar applications and represents the maximum achievable degree of reduction for VOC emissions from Tank 206 taking into account energy, environmental and economic impacts.

BACT analyses were not required for the existing truck loading rack or for the proposed denatured ethanol truck unloading rack. The existing truck loading rack will not be modified and requires no new analysis of best control technologies (VOC emissions from truck loading are currently controlled by a vapor recovery unit). Unloading at the proposed new truck unloading rack will create a vacuum at the point of unload and does not result in additional emissions other than fugitives from piping and tank loading.

IV. Emission Inventory

A complete emission inventory for each source within the Bozeman Marketing Terminal was submitted with MAQP Application #2830-00. The emission inventory submitted included 1993 Base Year Emission Estimates, Proposed Annual Emissions at Average Conditions, Proposed Daily Emissions at Maximum Conditions, and Proposed Hourly Emissions at Maximum Conditions. The inventory included VOC and all hazardous air pollutants emitted at the facility. The emission inventory does not include VRU controls for distillate loading because the actual recovery efficiency is not known.

The modification of Tank 206 from a fixed roof diesel storage tank to a denatured ethanol storage tank with an internal floating roof in MAQP 2830-03 would result in emissions of 0.29 ton/year total VOC. VOC emissions resulting from the addition of associated piping components is expected to be no more than 0.22 tons per year (TPY).

Tank 206 Denatured Ethanol - Internal Floating Roof Tank (calculated using Tanks 4.0.9d)

Components ^a	Losses(lbs)				Total Emissions
	Rim Seal Loss	Withdrawal Loss	Deck Fitting Loss	Deck Seam Loss	
Denatured Ethanol	12.75	490.28	80.72	0.00	583.75 lbs/yr =0.29 tpy
Ethyl alcohol	9.56	465.77	60.50	0.00	
Gasoline (RVP 9)	3.19	24.51	20.22	0.00	

b. Denatured Ethanol make-up provided by applicant: 95% Ethyl Alcohol, 5% Gasoline (RVP 9)

Denatured Ethanol Piping Components

Fugitive Leaks	# ^a	EPA Emission Factor ^b	VOC Emissions		
			(lb/hr)	(lb/yr)	(tpy)
		(lb/hr-comp)			
Valves	292	9.46E-05	2.76E-02	242.0	0.12
Fittings (connectors and flanges)	806	1.76E-05	1.42E-02	124.3	0.06
Pump Seals	4	1.19E-03	4.76E-03	41.7	0.02
Other ^c	34	1.30E-04	4.42E-03	38.7	0.02
TOTAL				446.7	0.22

a. Number of components provided by applicant

b. "EPA Protocol for Equipment Leak Emission Estimates," November 1995 (EPA-453/R-95-017), Table 2.3 Marketing Terminal Average Emission Factors for Light Liquid.

c. The "other" equipment type should be applied for any equipment type other than fittings, pumps, or valves.

V. Existing Air Quality

Exxon Mobil is located in Section 6, Township 2 South, Range 6 East, in Gallatin County, Montana. This area is considered attainment for all criteria pollutants. The majority of the emissions from the facility are VOC.

VI. Ambient Air Impact Analysis

The Department determined that the impacts from this permitting action will be minor. The Department believes it will not cause or contribute to a violation of any ambient air quality standard.

VII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the Department conducted the following private property taking and damaging assessment and determined there are no taking or damaging implications.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit action.

VIII. Environmental Assessment

An environmental assessment, required by the Montana Environmental Policy Act, was completed for this project. A copy is attached.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901, Helena, Montana 59620
(406) 444-3490

DRAFT ENVIRONMENTAL ASSESSMENT (EA)

Issued To: Exxon Mobil Corporation

Montana Air Quality Permit Number: 2830-03

Preliminary Determination Issued: April 12, 2011

Department Decision Issued:

Permit Final:

1. *Legal Description of Site:* Section 6, Township 2 South, Range 6 East, in Gallatin County, Montana
2. *Description of Project:* Bulk distribution terminal for petroleum products
3. *Objectives of Project:* The objective of the modification is to enable distribution of ethanol additized fuels from the Bozeman Bulk Terminal. The modification changes the designated use of one existing diesel storage tank (Tank 206) to store denatured ethanol, adds a new offloading rack dedicated to unloading denatured ethanol, and, installs associated pipe fittings, flanges and pumps.
4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the “no-action” alternative. The “no-action” alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the “no-action” alternative to be appropriate because Exxon Mobil Corporation (Exxon Mobil) demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the “no-action” alternative was eliminated from further consideration.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a BACT analysis, would be included in MAQP #2830-03.
6. *Regulatory Effects on Private Property:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

7. The following table summarizes the potential physical and biological effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Terrestrial and Aquatic Life and Habitats				X		Yes
B	Water Quality, Quantity, and Distribution				X		Yes
C	Geology and Soil Quality, Stability and Moisture				X		Yes
D	Vegetation Cover, Quantity, and Quality				X		Yes
E	Aesthetics				X		Yes
F	Air Quality			X			Yes
G	Unique Endangered, Fragile, or Limited Environmental Resources				X		Yes
H	Demands on Environmental Resource of Water, Air and Energy				X		Yes
I	Historical and Archaeological Sites				X		Yes
J	Cumulative and Secondary Impacts			X			Yes

SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS: The following comments have been prepared by the Department. Because the proposed modifications include changing the use of an existing above ground tank (Tank 206) (including the associated piping, valves and pumps) and adding a Denatured Ethanol truck unloading rack with no change in plant throughput that will result in minor increases in potential pollutant emissions, it is expected that there will be minor or no potential physical or biological effects.

A. Terrestrial and Aquatic Life and Habitats

The project would result in minor increases of VOC emissions. The applicant stated that there are no known fish or wildlife habitat at the site. Therefore, the Department determined that there would be no discernible impact on terrestrial and aquatic life. No habitats would be directly impacted, since the project would occur on existing developed industrial land. Therefore, no impacts to terrestrial and aquatic life habitats would be expected as a result of this permit action.

B. Water Quality, Quantity and Distribution

The project would result in minor increases of VOC emissions. This project would not require the use of water and there are no known proposed discharges to surface water at the site. The Department determined that there would be no discernible impacts to water quality, quantity and distribution for this permit action.

C. Geology and Soil Quality, Stability and Moisture

The project would result in minor increases of VOC emissions. The project would occur on existing developed industrial land on site. Therefore, the Department determined that there would be no discernible impacts to geology and soil quality, stability and moisture for this permit action.

D. Vegetation Cover, Quantity, and Quality

The project would result in minor increases of VOC emissions. Deposition of pollutants from this permitting action would be minute due to the very small amount of pollutants emitted. There are no known plant species near the construction site except for landscaping. Overall, there would be no discernable impacts to vegetation cover, quantity, and quality.

E. Aesthetics

This project would occur within the current site for this terminal. An existing tank is being modified and additional pumps and piping will be installed within the footprint of the existing terminal. Therefore, there would be no impacts to aesthetics as a result of this permitting action.

F. Air Quality

The project would result in minor increases of VOC emissions. New piping components are expected to increase potential fugitive VOC emissions by 0.22 tons per year (tpy). The fugitive tank emissions will increase by less than 0.1 tpy as a result of switching from diesel to denatured ethanol. VOC emissions resulting from truck loading racks are currently, and will continue to be, controlled by a vapor recovery unit that limits VOC emissions to no more than 35 milligrams per liter of aoline loaded. VOC emissions from truck loading will not increase as a result of the proposed project. Given the small increase in VOCs, this permitting action would result in a minor impact to air quality.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The project would result in minor increases of VOC emissions. The facility resides in an existing industrial area. Therefore, there would be expected to be no impacts to unique, endangered, fragile, or limited environmental resources.

H. Demands on Environmental Resource of Water, Air and Energy

The project would result in minor increases of VOC emissions. Therefore, there would be minor demands on air resources. The project would not require the use of water, and the Department determined that there would be no discernible impacts to water quality, quantity and distribution for this permit action. Therefore, no demand on water resources would be expected as a result of this project.

I. Historical and Archaeological Sites

This project would occur on-site and therefore not disturb any land on which has not already been developed and currently in use by Exxon Mobil. Therefore, no impacts to any historical or archaeological site would be anticipated.

J. Cumulative and Secondary Impacts

The project would result in minor increases of VOC emissions. However, the project would occur on existing developed industrial land, and there would be no discernable changes to the use of the property. Therefore, the Department would expect that there would be no cumulative and secondary impacts as a result of this project.

8. *The following table summarizes the potential economic and social effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.*

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Social Structures and Mores				X		Yes
B	Cultural Uniqueness and Diversity				X		Yes
C	Local and State Tax Base and Tax Revenue			X			Yes
D	Agricultural or Industrial Production				X		Yes
E	Human Health			X			Yes
F	Access to and Quality of Recreational and Wilderness Activities				X		Yes
G	Quantity and Distribution of Employment			X			Yes
H	Distribution of Population				X		Yes
I	Demands for Government Services			X			Yes
J	Industrial and Commercial Activity				X		Yes
K	Locally Adopted Environmental Plans and Goals				X		Yes
L	Cumulative and Secondary Impacts				X		Yes

SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS: The following comments have been prepared by the Department. Because the proposed modifications include changing the use of an existing above ground tank (Tank 206) (including the associated piping, valves and pumps) and adding a Denatured Ethanol truck unloading rack, with no change in plant throughput, it is expected that there will be minor or no potential economic or social effects.

A. Social Structures and Mores

The proposed facility would not cause a disruption to any native or traditional lifestyles or communities (social structures or mores) in the area because the project would take place at a previously disturbed, industrial site. The proposed project would not change the nature of the site.

B. Cultural Uniqueness and Diversity

The proposed project would not cause a change in the cultural uniqueness and diversity of the area because the land is currently used as a bulk terminal; therefore, the land use would not be changing.

C. Local and State Tax Base and Tax Revenue

The terminal’s overall throughput capacity limitation would not change as a result of the proposed project. In addition, no new permanent jobs will be created for this project. The project may add temporary construction jobs. Therefore, minor impacts to the local and state tax base and tax revenue are anticipated from this project.

D. Agricultural or Industrial Production

The proposed project would not result in a reduction of available acreage or productivity of any agricultural land; therefore, agricultural production would not be affected. The bulk terminal's overall throughput capacity limitation would not change as a result of the proposed project. Therefore, industrial production would not be affected.

E. Human Health

The project would result in minor increases of VOC emissions. The land is currently used as a bulk terminal and residences are located approximately one-quarter mile to one-half mile north of the site, therefore minor impacts to overall Human Health are expected from this permitting action.

F. Access to and Quality of Recreational and Wilderness Activities

The East Gallatin Recreation Area is located approximately one-quarter mile north of the facility and people may swim, fish or otherwise recreate at the area. This project would not have an impact on recreational or wilderness activities because this project would not result in any changes in access to and quality of recreational and wilderness activities.

G. Quantity and Distribution of Employment

No change in the number of permanent employees currently onsite is anticipated as a result of this project. The project may add temporary construction jobs. Therefore, this project would have minor impacts to the quantity and distribution of employment at the facility

H. Distribution of Population

This project does not involve any significant physical or operational change that would affect the location, distribution, density, or growth rate of the human population. The distribution of population would not change as a result of this project.

I. Demands for Government Services

The demands on government services would experience a minor impact. The primary demand on government services would be the acquisition of the appropriate permits by the facility and compliance verification with those permits.

J. Industrial and Commercial Activity

The bulk terminal's overall capacity would not change as a result of the proposed project. Industrial and commercial activity in the neighboring area is not anticipated to be affected by issuing MAQP #2830-03. Therefore, no impacts on industrial activity may be expected as a result.

K. Locally Adopted Environmental Plans and Goals

The Department is not aware of any locally adopted environmental plans and goals that would be impacted by this project.

L. Cumulative and Secondary Impacts

The project would result in minor increases of VOC emissions. However there would be no expected change in the quantity or distribution of employment, and the proposed project would not change the nature of the site. The Department therefore would expect that there would be no cumulative and secondary impacts as a result of this project.

Recommendation: No Environmental Impact Statement (EIS) is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for the modification of an existing bulk distribution terminal for petroleum products.

MAQP #2830-03 includes conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

Individuals or groups contributing to this EA: Department of Environmental Quality – Air Resources Management Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

EA prepared by: Deanne Fischer

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